

Total No. of Questions: 6

Total No. of Printed Pages: 2

Enrollment No.....



Faculty of Engineering / Science

End Sem Examination May-2023

EN3HS01 / BC3HS03 History of Science & Technology

Programme: B.Tech. / B.Sc.

Branch/Specialisation: All

Duration: 3 Hrs.

Maximum Marks: 60

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

- Q.1 i. Who is known as the Indian Father of Green Revolution? 1  
(a) M.S Swaminathan (b) M. Visvesvaraya  
(c) Homi Jehangir Bhabha (d) A. P. J. Abdul Kalam
- ii. Who was the first Indian Scientist to receive Nobel prize in the field of science is \_\_\_\_\_. 1  
(a) K. Chandrasekharan (b) Har Gobind Khorana  
(c) Jagadish Chandra Bose (d) C. V. Raman
- iii. CSIR was established in year- 1  
(a) 2008 (b) 1956 (c) 1942 (d) 1947
- iv. Swachh Bharat Mission launched in year- 1  
(a) 2014 (b) 2015 (c) 2016 (d) 2018
- v. The technological missions in India were initiated by? 1  
(a) Pt. Jawaharlal Nehru (b) Vikram Sarabhai  
(c) Satish Dhawan (d) Rajiv Gandhi
- vi. When was the fourth five-year plan ended? 1  
(a) 1974 (b) 1973 (c) 1975 (d) 1971
- vii. The Biotech Capital of INDIA is \_\_\_\_\_. 1  
(a) Bengaluru (b) Mumbai  
(c) Pune (d) Ahmedabad
- viii. What is full form of GSLV? 1  
(a) Giant Synchronized Launch Vehicle  
(b) Geo Systematic Launch Vehicle  
(c) Geo Synchronous Launch Vehicle  
(d) Geosynchronous Satellite Launch Vehicle

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- ix. Transfer of technology from Research labs to industries is an example of- 1  
(a) Vertical TOT (b) Horizontal TOT  
(c) National TOT (d) Informed TOT
- x. Solar cooking is an example of- 1  
(a) Patent (b) Appropriate technology  
(c) Licensing (d) None of these
- Q.2 i. Illustrate the relation between science and faith giving two examples. 2  
ii. Explain how science improvises the quality of our life. 3  
iii. Enlist the contributions of the ancient India to the world of science. 5  
OR iv. Mention any five qualities of a good scientist and justify your answer. 5
- Q.3 i. How R&D is important for the developing country? 2  
ii. Explain the importance of science and technology education in India. 8  
What initiatives are taken by Indian government to promote science and technology education in India?  
OR iii. Write a note on technology missions in India. 8
- Q.4 i. What was Nehru's vision about science and technology for Independent India? 3  
ii. Enlist the scientific achievements/developments made during five-year plans period. 7  
OR iii. What is full form of SPR? Also discuss any three science policies with their major objectives. 7
- Q.5 i. Write short note on INSAT. 4  
ii. What are non-conventional energy sources? Discuss any three sources. 6  
OR iii. Discuss about India's nuclear energy program. 6
- Q.6 Attempt any two: 5  
i. What is appropriate technology? Give any two examples. 5  
ii. What is the difference between franchising and licensing? Also give one example for each. 5  
iii. Explain any five barriers of technology change. 5

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P.T.O.

## Marking Scheme

### BC3HS03- EN3HS01 History of Science & Technology

Q.1	i)	Who is known as the Indian Father of Green Revolution?	1
		a) M.S. Swaminathan	
	ii)	Who was the first Indian Scientist to receive Nobel prize in the field of science is _____.	1
		d) C. V. Raman	
	iii)	CSIR was established in year	1
		(c) 1942	
	iv)	Swachh Bharat Mission launched in year-	1
		(a) 2014	
	v)	The technological missions in India were initiated by?	1
		(d) Rajiv Gandhi	
Q.2	vi)	When was the fourth five-year plan ended?	1
		(a) 1974	
	vii)	The Biotech Capital of INDIA is _____?	1
		a) Bengluru	
	viii)	What is full form of GSLV?	1
		d) Geosynchronous Satellite Launch Vehicle	
	ix)	Transfer of technology from Research labs to industries is an example of-	1
		(a) Vertical TOT	
	x)	Solar cooking is an example of-	1
		(b) Appropriate technology	
Q.2	i.	Illustrate the relation between science and faith giving two examples.	2
		Relation between science and faith.	-1 Mark
		2 examples	-1 Mark
	ii.	Explain how science improves the quality of our life?	3
		Explanation	-3 Marks
	iii.	Enlist the contributions of the ancient India to the world of science.	5
		Contribution (5 or more) (1 EACH)	-5 Marks
	OR iv.	Mention any 5 qualities of a good scientist and justify your answer.	5
		Qualities with description. (1 EACH)	-5 Marks

Q.3	i.	How R&D is important for the developing country?	2
		Explanation	-2 Marks
	ii.	Explain the importance of science and technology education in India. What initiatives are taken by Indian government to promote science and technology education in India?	8
		Explain the importance of science and technology education in India.	-4 Marks
		What initiatives are taken by Indian government to promote science and technology education in India?	-4 Marks
	OR iii.	Write a note on technology missions in India.	8
		If given 4 or more technology missions with their description-8 Marks	
Q.4	i.	What was Nehru's vision about science and technology for Independent India?	3
		Explanation	-3 Marks
	ii.	Enlist the scientific achievements/developments made during five year plans period.	7
		If given 7 or more	-7 Marks
	OR iii.	What is full form of SPR? Also discuss any three science policies with their major objectives?	7
		What is full form of SPR?	-1 Mark
		Three science policies with their major objectives?	2*3= 6 Marks
Q.5	i.	Write short note on INSAT.	4
		Short note	-4 Marks
	ii.	What are non-conventional energy sources? Discuss any three sources.	6
		What are non-conventional energy sources?	1.5 Marks
		Discuss any three sources.	1.5*3=4.5 Marks
	OR iii.	Discuss about India's nuclear energy program.	6
		Discuss about India's nuclear energy program	-6 Marks
Q.6	i.	What is appropriate technology? Give any 2 examples.	5
		What is appropriate technology?	-3 Marks
		Give any 2 examples.	-2 Marks

- ii. What is the difference between franchising and licensing? Also give one example for each. **5**

What is the difference between franchising and licensing?

-3 Marks

Also give one example for each.

-2 Marks

- iii. Explain various barriers of technology change. (Any 5) **5**  
Explanation (1 EACH) -5 Marks

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